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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,336	10/14/2003	Robert D. Keefover	DKT 03016 (BW1-00087)	1254

7590 02/21/2007  
Patent Docket Administrator  
BorgWarner Inc.  
3850 Hamlin Rd.  
Auburn Hills, MI 48326

EXAMINER
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AURORA, REENA

ART UNIT	PAPER NUMBER
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2862

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/685,336

Applicant(s)

KEEFOVER ET AL.

Examiner

Reeña Aurora

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3 - 14 and 16 - 42 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) 8 and 19 - 42 is/are allowed.  
6) ☒ Claim(s) 1, 5 - 7, 9, 12 - 14 and 18 is/are rejected.  
7) ☒ Claim(s) 3, 4, 10, 11, 16 and 17 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This communication is in response to amendment received on 11/13/06.

Claims 1, 3 – 14 and 16 – 42 are presented for examination.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first output circuit responsive to the sensor signal and providing a first output is not shown and the second output circuit responsive to the sensor signal and providing a second output signal as claimed in claims 1, 8 and 14 are not shown must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 5 – 7, 9, 12 – 14 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Fey et al. (6,552,531).

As to claim 1, Fey et al. (hereinafter Fey) discloses a method and circuit for processing signals for a sensor comprising a single sensor element (2), said single sensor element (2) providing a sensor signal that varies with the measured parameter; a first output circuit (FS1) responsive to the sensor signal and providing a first output signal; a second output circuit (FS2) responsive to the sensor signal and providing a second output signal, wherein the first (signal from FS1) and second (signal from FS2) output signals are two of multiple outputs from the sensor element (2); shared circuits coupled to the sensor element and the first and second output circuits, said shared circuits (4, 5) including circuit elements used by both the first (FS1) and second (FS2)

output circuits; and wherein system diagnostics are preformed without two or more sensors (col. 3, lines 1 - 11).

As to claim 9, Fey discloses a method and circuit for processing signals for a sensor comprising a single sensor element (2) for sensing the parameter, said single sensor element (2) providing a sensor signal; shared circuits (4, 5) coupled to the sensor element (2), said shared circuits (4, 5) providing sensing system operations; a first output circuit (FS1) responsive to the sensor signal from the shared circuits (4, 5), said first output circuit providing a first output signal (signal from FS1); and a second output circuit (FS2) responsive to the sensor signal from the shared circuits (4, 5), said second output circuit providing a second output signal (signal from FS2), wherein the first (FS1) and second (FS2) output signals are multiple outputs from the sensor element (2).

As to claim 14, Fey discloses a method and circuit for processing signals for a sensor comprising sensing the parameter with a single sensor element (2) and providing a sensor signal indicative of the parameter (col. 3, lines 1 - 11); applying the sensor signal to a first output circuit (FS1), said first output circuit providing a first output signal indicative of the sensed condition; applying the sensor signal to shared circuits (4, 5) before applying the sensor signal to the first (FS1) and second (FS2) output circuits; and applying the sensor signal to a second output circuit (FS2), said second output circuit providing a second output signal indicative of the sensed condition, wherein the first (signal from FS1) and second (signal from FS2) output signals are two of multiple outputs from the sensor element.

As to claims 5 and 12, Fey discloses that the sensor element is selected from the group consisting of Hall-effect sensors, inductive sensors, magneto-resistive sensors, encoders and potentiometers (col. 1, lines 13 - 23).

As to claims 6 - 7, 13 and 18, Fey discloses that the sensing system monitors the condition of a parameter or component in a vehicle (col. 1, lines 30 - 35) and monitoring a throttle plate position in a throttle body (intended use).

#### ***Allowable Subject Matter***

Claims 3, 4, 10, 11, 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 8 and 19 - 42 are allowed.

#### ***Response to Arguments***


Applicant's arguments with respect to claims 1, 3 - 14 and 16 - 42 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reena Aurora whose telephone number is 571-272-2263. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, E. Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Reena Aurora

  
**REENA AURORA**  
**PRIMARY EXAMINER**  
**TECHNOLOGY CENTER 2800**